Claims:

1. A method for seismically surveying a formation around a wellbore, comprising:

lowering one or more seismic stations into the wellbore, each seismic station comprising optically based seismic sensors, at least three of the sensors arranged to sense in axes approximately orthogonally positioned;

coupling the sensors to the formation; and

detecting one or more seismic events at each of the sensors.

2. The method of claim 1, further comprising affixing the one or more seismic stations to a production pipe prior to lowering the one or more seismic stations into the wellbore.

3. The method of claim 1, wherein the one or more seismic stations comprise a plurality of seismic stations, each seismic station comprising optically based seismic sensors, at least three of the sensors arranged to sense in axes approximately orthogonally positioned.

4. The method of claim 3, wherein one or more of the plurality of seismic stations is disposed nearer to a reservoir of the formation than a remainder of the plurality of seismic stations for micro-seismic monitoring.

5. The method of claim 4, wherein the remainder of the plurality of seismic stations are utilized for vertical seismic profiling.

6. The method of claim 3, wherein the plurality of seismic stations is disposed within a clamping mechanism.

7. The method of claim 3, wherein at least one optical cable interconnects the plurality of seismic stations.

8. The method of claim 7, wherein a signal from the sensors within the plurality of seismic stations is multiplexed.

9. The method of claim 3, wherein the optically based seismic sensors are accelerometers.

10. The method of claim 1, wherein the at least three of the sensors are arranged along three axes.

11. The method of claim 1, wherein coupling the sensors to the formation comprises deploying the sensors against a casing disposed in the wellbore.

12. The method of claim 1, wherein the one or more seismic stations comprise a clamping mechanism.

13. The method of claim 12, wherein coupling the sensors to the formation comprises activating the clamping mechanism to deploy at least a portion of the clamping mechanism against a casing disposed in the wellbore.

14. The method of claim 1, wherein the one or more seismic stations comprise a mandrel coupled to the production pipe.

15. The method of claim 14, wherein coupling the sensors to the formation comprises coupling the mandrel to the formation.

16. The method of claim 1, wherein detecting one or more seismic events at each of the sensors comprises mapping a fluid contact in a reservoir in the formation using four-dimension vertical seismic profiling.

17. The method of claim 1, wherein the one or more seismic events comprise one or more micro-seismic events.

18. The method of claim 17, further comprising correlating the one or more micro-seismic events to production activity.

19. The method of claim 17, further comprising correlating the one or more micro-seismic events to gas injection activity.

20. A method for seismically surveying a formation around a wellbore, comprising:

lowering one or more seismic stations into the wellbore, each seismic station comprising optically based seismic sensors, at least three of the sensors arranged to sense in axes approximately orthogonally positioned;

lowering one or more optically based hydrophones into the wellbore;

coupling the sensors and the one or more optically based hydrophones to the formation; and

detecting one or more seismic events at each of the sensors and the one or more hydrophones.

21. The method of claim 20, further comprising affixing the one or more seismic stations to a production pipe prior to lowering the one or more seismic stations in the wellbore.

22. The method of claim 20, wherein the at least three optically based seismic sensors are orthogonally arranged along three axes.

23. The method of claim 20, wherein the one or more optically based hydrophones comprise:

a housing enclosing a liquid;

a diaphragm attached to the housing, wherein the diaphragm transmits acoustic pressures from a fluidic media to the liquid; and

an optically based sensor positioned within the liquid for sensing the acoustic pressures in the liquid.

24. The method of claim 20, further comprising determining the difference between in-phase upwave and downwave amplitudes measured by the sensors and anti-phase downwave and upwave amplitudes measured by the one or more hydrophones to separate the downwaves and upwaves.

25. The method of claim 20, further comprising determining an image of the formation using the one or more hydrophones and the sensors.

26. The method of clam 25, further comprising comparing the image of the formation obtained by the one or more hydrophones to the image of the formation obtained by the sensors to account for mechanical resonance of the sensors.

27. The method of claim 20, wherein the sensors are accelerometers.

28. The method of claim 20, wherein the one or more seismic events are one or more microseismic events.

29. A seismic sensing system, comprising:

casing disposed in a wellbore formed in a formation;

one or more seismic stations disposed in the wellbore, each seismic station comprising optically based seismic sensors, at least three of the sensors arranged to sense in axes approximately orthogonally positioned and coupled to the formation through the casing; and

seismic processing equipment coupled to the one or more seismic stations by one or more optical waveguides and configured to detect one or more seismic events at each of the sensors.

30. The seismic sensing system of claim 29, further comprising a production pipe disposed within the casing, wherein the one or more seismic stations are affixed to the production pipe.

31. The seismic sensing system of claim 29, further comprising an optically based hydrophone.

32. The seismic sensing system of claim 29, wherein the one or more seismic stations comprise a plurality of seismic stations.

33. The seismic sensing system of claim 32, wherein one of the plurality of seismic stations is disposed nearer to a reservoir of the formation than a remainder of the plurality of seismic stations to conduct micro-seismic monitoring.

34. The seismic sensing system of claim 32, wherein a signal from the sensors is multiplexed.

35. The seismic sensing system of claim 32, wherein the plurality of seismic stations is disposed within a clamping mechanism.